What Is Claimed:

1. A waste stream treatment method comprising:

feeding a waste stream comprising nitrates, nitrites, or mixtures thereof to a reactor;

heating the reactor to a reaction temperature;

feeding a carbon-containing additive to the reactor;

decomposing the carbon-containing additive to form a carbon-containing radical; and

reducing the nitrites, nitrates, or mixtures thereof via reaction with the carbon-containing radical to a product stream, wherein the product stream comprises nitrogen gas, carbonate salts, and at least one of carbon monoxide and carbon dioxide,

2. The method of claim 1, wherein the nitrates, nitrites, or mixtures thereof are metal nitrates, metal nitrites, or mixtures thereof.

3. The method of claim 1, wherein the reaction temperature is less than about 1,400°F.

4. The method of claim 3, wherein the carbon-containing additive is isopropyl alcohol.

5. The method of claim 3, wherein the carbon-containing additive is polypropylene.

6. The method of claim 1, wherein the reactor is a fluidized bed reactor fluidized with superheated steam, carbon dioxide, or a mixture thereof.

7. The method of claim 1, wherein the reactor is indirectly heated.

8. The method of claim 1, wherein the waste stream comprises radioactive materials.

9. The method of claim 8, wherein the reactor is operated at negative gauge pressure.

10. The method of claim 1, wherein the waste stream further comprises sulfur-containing compounds, the method further comprising reduction of the sulfur-containing compounds.

11. A waste stream treatment method comprising:

providing a waste stream comprising alkali metal nitrates, alkali metal nitrites, or combinations thereof to a fluidized bed reactor wherein the bed is fluidized by means of a fluidizing stream;

indirectly heating the reactor to a reaction temperature;

providing a carbon-containing additive to the reactor, wherein the carbon-containing additive decomposes at the reaction temperature; and

reforming the waste stream in the reactor in the presence of the additive, wherein the alkali metal compounds are reduced to form alkali metal carbonate salts, nitrogen gas, and one or both of carbon monoxide and carbon dioxide.

12. The method of claim 11, wherein the alkali metal is sodium or potassium.

13. The method of claim 11, wherein the carbon-containing additive is isopropyl alcohol.

14. The method as claim 13, wherein the additive is provided to the reactor in line with the waste stream.

15. The method of claim 11, wherein the carbon-containing additive is polypropylene.

16. The method of claim 11, wherein the reaction temperature is less than about 1,400°F.

17. The method of claim 11, wherein the waste stream is an aqueous waste stream and the fluidizing stream comprises carbon dioxide.

18. The method of claim 17, wherein the fluidizing stream contains essentially no steam.

19. The method of claim 11, wherein the waste stream comprises radioactive material.

20. The method of claim 11, wherein the additive is a gas.

21. The method of claim 20, wherein the additive is provided to the reactor in line with the fluidizing stream.

22. A waste or gaseous stream treatment method comprising

providing a waste or gaseous stream comprising one or more nitrogen oxide compounds;

injecting and decomposing a carbon-containing compound to form a carbon-containing radical;

contacting the waste stream with the carbon-containing radical; and

reducing the one or more nitrogen oxide compounds via reaction with the carbon-containing radical to form a product stream, the product stream comprising nitrogen gas at least one of carbon monoxide and carbon dioxide.

23. The method of claim 22, wherein the waste stream comprises a nitrogen oxide compound that is the product of a combustion process.

24. The method of claim 22, wherein the waste stream comprises a nitrogen oxide compound that is the product of a gasification process.

25. The method of claim 22, wherein the waste stream is contacted with the carbon-containing radical in a reformation process.

26. The method of claim 22, wherein the waste stream and the carbon-containing radical are contacted at a temperature of between about 600°F and about 2,000°F.

27. The method of claim 22 wherein the nitrogen oxide compounds are reduced in an atmosphere comprising less than about 5% oxygen by volume.